Opinion relating to International Preliminary Examination

(Application No. PCT/JP2005/001987)

<1> In this PCT (foreign) filing, a result of the preliminary examination on the invention claimed in Claims 8 to 21 in attached sheets which are already amended is given. An examiner found and judged as follows:

1) The invention claimed in Claims 8 to 14 can be thought of easily from descriptions in Literatures 1 to 7 by those skilled in the art, and

2) The invention claimed in Claims 15 to 21 can be thought of easily from descriptions in Literatures 1 to 4 by those skilled in the art.

<2> The finding and judgment of the examiner as described above are unacceptable from the following reasons.

1) The invention claimed in Claims 8 to 14

The invention in Claim 8 is a method of analyzing gene polymorphism efficiently with high degree of accuracy using the gene detection field-effect device provided with the insulation film, the semiconductor substrate, and the reference electrode. In the analysis, measurement of the output value of the gene detection field-effect device is classified and displayed by the relation patterns between the differential output value V1 and the differential output value V2, so that the gene polymorphism can be analyzed more efficiently in comparison with the related art.

Such detailed requirements relating "measurement of the output value" are neither disclosed nor suggested in any of Literatures 1 to 7.

Therefore, since the invention in Claim 8 is different from the invention in Literatures 1 to 7 in configuration, operation and advantages, and cannot be

ATTACHMENT F

thought of easily, it is understood to have a sufficient progressivity as the invention.

From these reasons, the invention claimed in Claims 9 to 14, which further limits the invention in Claim 8 technically, is also understood to have the progressivity.

2) The invention claimed in Claim 15 to 21

The invention in Claim 15 relates to a gene polymorphism measuring system including the flow cell, the flow channel and the signal processing circuit, and is characterized in that <1> the flow cell including therein the gene detection field-effect device provided with the insulation film including the nucleic acid probe immobilized on one of the surfaces thereof, the semiconductor substrate being installed so as to abut against the other surface of the insulation film, and the reference electrode, <2> the flow channel for introducing the sample solution to the gene detection field-effect device being connected to the flow cell, and <3> the flow cell being connected to the signal processing circuit for processing the signal detected by the gene detection field-effect device.

In other words, only with the invention in Claim 15, the system for demonstrating effects and advantages of the gene detection field-effect device sufficiently (the gene polymorphism measuring system) can be established, and hence the gene polymorphism can be measured more efficiently with high degree of accuracy in comparison with the related art.

The invention in Claim 15 claiming the gene polymorphism measuring system having such configuration, effects and advantages is neither disclosed nor suggested in Literatures 1 to 7.

The invention in Claim 15 is completely different from the invention

described in Literatures 1 to 7 in configuration and effects. Even those skilled in the art cannot think of the invention in Claim 15 easily on the basis of the description in Literatures 1 to 7.

Therefore, the invention in Claim 15 is understood to have a progressivity of the invention sufficiently. From these reasons, since the invention claimed in Claim 16 to 21 further limit the gene polymorphism measuring system having such characteristics (the invention claimed in Claim 15 after amendment) in terms of the technical requirements such as the nucleic acid probe, the electrode, the heater, the temperature sensor, and so on, it is considered to have the progressivity of the invention as a matter of course.

<3> However, since the finding and judgment of the examiner depends on a technical common sense, the judgment of the examiner such that "the invention is easy" is naturally different. This difference counts in the examination in foreign countries as a matter of course.

Therefore, it is important to strongly insist that

1) employment of silicon nitride as a gate insulation film

2) characteristic of the elongation

3) selective reactivity of DNA polymerase

on the basis of the examples in this application. Therefore, we think that it is preferable to reflect the following addition and amendment, which express detailed requirements in Claims, at the time of transfer to the foreign countries.